

REMARKS

Claims 1-17 and 21-22 are pending for examination with claims 1, 2, 3, 5, 6, 8, 9, 10, 11, 17, and 21 being independent claims. Applicant has amended claims 1-11, 17, and 21 to improve the form of the claims, and not for any reasons of patentability. The scope of the amended claims remains unchanged. No new matter has been added.

In response to the Interview Summary mailed April 21, 2005, the undersigned wishes to thank Examiner Parthasarathy for the courtesies extended in granting and conducting a telephone interview on April 11, 2005. The substance of the telephone interview briefly were included in the reply filed April 20, 2005.

Rejections under 35 USC § 103

Claims 1-8, 14-15 and 20-21 stand rejected under 35 USC § 102(e) as being unpatentable over U.S. Patent No. Re. 36,946 to Diffie et al. [hereinafter Diffie]. Applicant respectfully traverses the rejection as follows.

Independent Claim 1

Claim 1, as amended, recites, *inter alia*, the network address having a portion derived from the public key of the first computing device usable to route a message to the first computing device. The amended portion, usable to route a message to the first computing device, does not limit the scope of the claim as previously amended, since the meaning of a network address as usable to route a message is defined in the specification. (See, Specification, paragraphs 004 and 0032). Moreover, the Microsoft Computer Dictionary, 5th ed., Microsoft Press, 2002, defines a network address as a "name or token specifying a particular computer or site on the Internet or other

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network” or as “a code used to specify an email destination.” Thus, the scope of the claim remains unchanged after the present amendment.

Diffie does not teach or suggest these features of claim 1. More particularly, Diffie does not teach or suggest, much less even mention a network address usable to route a message. Rather, Applicant cannot find any reference in Diffie which suggests a network address usable to route a message to a first computing device, much less, that a portion of the network address may be derived from the public key of any computing device, much less derived from the public key of the first computing device, and much less.

In the telephone interview of April 11, 2005, Examiner Parthasarathy suggested that the encryption of the first random number by the mobile public key was a network address. Applicant respectfully disagrees. Specifically, any value contained in a message is not a network address. As noted above, a network address is usable to route a message to a computing device. The encryption of the first random number by the mobile public key is not a network address usable to *route* a message. There is nothing in Diffie which teaches or suggests a network address, much less a network address having a portion derived from the public key of a first computing device usable to route a message to the first computing device as claimed in claim 1.

Moreover, assuming without agreeing that Diffie’s encryption of the first random number is a network address, this encryption is not derived from the public key of a first computing device. In the interview, Examiner Parthasarathy suggested that Diffie’s inclusion of E(Pub_Mobile, RN1)(see, Diffie, col. 8, line 8) was an encryption of the mobile device’s public key (Pub_Mobile) by a key RN1, and that the result was a derivation of the public key of the mobile device. Applicant respectfully disagrees.

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Diffie specifically states that the notation of E(X, Y) is defined as “the encryption of Y under key X.” (Diffie, col. 6, line 39). In this manner, the random number is encrypted *by* the public key of the mobile host. Thus, the encrypted first random number is not derived *from* the public key, but is rather derived from the first random number.

In addition, claim 1 recites, *inter alia*, the message including the digital signature in a packet option. Diffie does not teach or suggest these features of claim 1. Rather, Diffie is silent as to the format of the messages exchanged between the mobile host and the base. More particularly, Diffie is silent as to whether the information in the exchanged messages is included in one or more message headers, the message body, and the like. In contrast, claim 1 specifically recites that the message includes the digital signature in a packet option, which allows the recipient of the message to discard the signature in the packet option and accept the remainder of the message. (*See*, specification, para. 0039). Diffie does not teach or suggest the specific features of claim 1, nor even suggest the functionality of a packet option.

Accordingly, claim 1 distinguishes over Diffie such that the rejection under § 102 should be withdrawn.

Independent Claim 2

Claim 2, as amended, recites, *inter alia*, a computer readable medium containing instructions for performing a method which is identical to that claimed in amended claim 1. The amended portion, usable to route a message to the first computing device, does not limit the scope of the claim as previously amended, since the meaning of a network address as usable to route a message is defined in the specification. (*See*, Specification, paragraphs 004 and 0032). Moreover, the Microsoft Computer Dictionary, 5th ed., Microsoft Press, 2002, defines a network address as a “name or token specifying

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a particular computer or site on the Internet or other network” or as “a code used to specify an email destination.” Thus, the scope of the claim remains unchanged after the present amendment.

As discussed above with reference to claim 1, Diffie does not teach or suggest a network address, much less a network address having a portion derived from the public key of a first computing device, and much less a network address usable to route a message. Moreover, even were an encryption of a random number a network address, such encryption of a random number *by* a public key of a mobile device is not derived *from* the public key.

Accordingly, claim 2 distinguishes over Diffie for at least the foregoing reasons discussed above with reference to claim 1. Accordingly, Applicant respectfully requests withdrawal of the rejection under § 102.

Independent Claim 3

Claim 3, as amended, recites, *inter alia*, deriving a portion of a second network address from the public key of the first computing device, and the first network address being usable to route a message to the first computing device. The amended portion, the first network address usable to route a message to the first computing device, does not limit the scope of the claim as previously amended, since the meaning of a network address as usable to route a message is defined in the specification. (See, Specification, paragraphs 004 and 0032). Moreover, the Microsoft Computer Dictionary, 5th ed., Microsoft Press, 2002, defines a network address as a “name or token specifying a particular computer or site on the Internet or other network” or as “a code used to specify an email destination.” Thus, the scope of the claim remains unchanged after the present amendment.

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As discussed above with reference to claim 1, Diffie does not teach or suggest a network address, much less a second network address having a portion derived from the public key of a first computing device, and much less a network address usable to route a message. Moreover, even were an encryption of a random number a network address, such encryption of a random number *by* a public key of the mobile device is not derived *from* the public key.

Accordingly, claim 3 distinguishes over Diffie such that the rejection under § 102 should be withdrawn. Claim 4 depends from claim 3, and is patentable for at least the foregoing reasons.

Independent Claim 5

Claim 5, as amended, recites, *inter alia*, a computer readable medium containing instructions for performing a method which is identical to that claimed in amended claim 3. The amended portion, the first network address usable to route a message to the first computing device, does not limit the scope of the claim as previously amended, since the meaning of a network address as usable to route a message is defined in the specification. (See, Specification, paragraphs 004 and 0032). Moreover, the Microsoft Computer Dictionary, 5th ed., Microsoft Press, 2002, defines a network address as a “name or token specifying a particular computer or site on the Internet or other network” or as “a code used to specify an email destination.” Thus, the scope of the claim remains unchanged after the present amendment.

As discussed above with reference to claim 3, Diffie does not teach or suggest a network address, much less a network address having a portion derived from the public key of a first computing device, and much less a network address usable to route a message. Moreover, even were an encryption of a random number a network address,

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such encryption of a random number *by* a public key of a mobile device is not derived *from* the public key.

As a result, claim 5 distinguishes over Diffie for at least the foregoing reasons discussed above with reference to claim 3. Accordingly, Applicant respectfully requests withdrawal of the rejection under § 102.

Independent Claim 6

Claim 6, as amended, recites, *inter alia*, a method for a computing device to derive a node-selectable portion of a network address and setting the node-selectable portion of the network address to a portion of the value produced by the hashing, the network address being usable to route a message to the computing device. The amended portion, the network address being usable to route a message to the computing device, does not limit the scope of the claim as previously amended, since the meaning of a network address as usable to route a message is defined in the specification. (See, Specification, paragraphs 004 and 0032). Moreover, the Microsoft Computer Dictionary, 5th ed., Microsoft Press, 2002, defines a network address as a "name or token specifying a particular computer or site on the Internet or other network" or as "a code used to specify an email destination." Thus, the scope of the claim remains unchanged after the present amendment.

As discussed above with reference to claim 1, Diffie does not teach or suggest a network address. Moreover, Diffie does not teach or suggest a method of deriving a network address, much less deriving a node-selectable portion of a network address, and even much less setting the node-selectable portion of the network address to a portion of the value produces by the hashing as recited in claim 1.

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Claim 6, as amended, also recites, *inter alia*, comparing a portion of a value produced by the hashing of a public key with a portion of the network address other than the node-selectable portion, the portion of the network address other than the node-selectable portion being defined by a network address protocol. The amended portion, the portion of the network address other than the node-selectable portion being defined by a network address protocol, does not limit the scope of the claim as previously amended, since the meaning of a non-node-selectable portion of a network address as being defined by a network address protocol is defined in the specification. (See, Specification, paragraphs 004, 0029, and 0032). Thus, the scope of the claim remains unchanged after the present amendment.

As discussed above with reference to claim 1, Diffie does not teach or suggest a network address. Moreover, Diffie does not teach or suggest comparing anything to a network address, much less comparing a portion of a value produced by hashing the public key to a network address. Even were Diffie to suggest comparing a hash of the public key with a network address, there is nothing in Diffie to teach or suggest that a portion of a hashed public key is compared to the portion of the network address that is not *node-selectable*.

Claim 6 recites, *inter alia*, if the portions do not match, choosing a modifier, appending the modifier to the public key, and repeating the hashing and comparing. Applicant is unable to find any reference in the cited sections of Diffie which teach or suggest these features of claim 6. Rather, Diffie does suggest that the certificate contains a hash of the public key (*see*, Diffie, col. 7, lines 23–37) and does suggest that randomly generated numbers, such as CH1, RN1, and RN2 may be included in a message. However, none of the random numbers of Diffie is appended to the public

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key, much less hashed together, and even much less compared again to the portion of the network address other than the node-selectable portion.

Accordingly, claim 6 distinguishes over Diffie such that the rejection under § 102 should be withdrawn. Claim 7 depends from claim 6, and is patentable for at least the foregoing reasons.

Independent Claim 8

Claim 8, as amended, recites, *inter alia*, a computer readable medium containing instructions for performing a method which is identical to that claimed in amended claim 6. As noted above with claim 6, the amended portions do not limit the scope of the claim as previously amended, since the meaning of a network address and a network protocol are defined in the specification. (See, Specification, paragraphs 004 and 0032). Moreover, the Microsoft Computer Dictionary, 5th ed., Microsoft Press, 2002, defines a network address as a "name or token specifying a particular computer or site on the Internet or other network" or as "a code used to specify an email destination." Thus, the scope of the claim remains unchanged after the present amendment.

As discussed above with reference to claim 6, Diffie does not teach or suggest a network address. Moreover, Diffie does not teach or suggest comparing anything to a network address, much less comparing a portion of a value produced by hashing the public key to a network address. Even were Diffie to suggest comparing a hash of the public key with a network address, there is nothing in Diffie to teach or suggest that a portion of a hashed public key is compared to the portion of the network address that is not *node-selectable*. In addition, Diffie does not teach or suggest appending a modifier to the public key, much less hashing the appended modifier and public key, and even

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much less comparing the hash result again to the portion of the network address other than the node-selectable portion.

Accordingly, claim 8 distinguishes over Diffie such that the rejection under § 102 should be withdrawn.

Independent Claim 9

Claim 9 recites, *inter alia*, a method for a computing device to derive a node-selectable portion of a network address from a public key of the computing device and from a route prefix of the network address of the computing device. As discussed above with reference to claims 1 and 6, Diffie does not teach or suggest a network address, much less a method for deriving a network address, and even much less deriving a network address from a public key.

Claim 9, as amended, recites, *inter alia*, hashing the public key and at least a portion of the route prefix of the network address, the route prefix being suitable for routing a message to an appropriate link in a network. The amended portion, the route prefix being suitable for routing a message to an appropriate link in a network, does not limit the scope of the claim as previously amended, since the meaning of a route prefix of a network address as suitable for routing a message to an appropriate link in a network is defined in the specification. (See, Specification, paragraphs 004, 0029, and 0032). Thus, the scope of the claim remains unchanged after the present amendment.

Diffie does not teach or suggest hashing any portion of a network address, much less hashing the route prefix of the network address, and much less hashing the route portion of the network prefix with a public key.

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Claim 9 recites, *inter alia*, setting the node-selectable portion of the network address to a portion of the value produced by the hashing. As discussed above with reference to claim 6, Diffie does not teach setting a network address to anything, much less setting the node-selectable portion of a network address, and much less setting the node-selectable portion of the network address to a portion of a hashed value.

Claim 9 recites, *inter alia*, checking to see if the network address is already in use, and if so, choosing a modifier, appending the modifier to the public key, and repeating the hashing, setting, and checking. Diffie does not teach or suggest anything about network addresses, much less checking to see if there is an already existing network address. Moreover, as discussed above with reference to claim 6, Diffie does not teach or suggest selecting a modifier, appending the modifier to the public key, and hashing the combined public key and modifier.

Accordingly, claim 9 distinguishes over Diffie such that the rejection under § 102 should be withdrawn

Independent Claim 10

Claim 10, as amended, recites, *inter alia*, a computer readable medium containing instructions for performing a method which is identical to that claimed in amended claim 9. As noted above with claim 9, the amended portion, the route prefix being suitable for routing a message to an appropriate link in a network, does not limit the scope of the claim as previously amended, since the meaning of a route prefix of a network address as suitable for routing a message to an appropriate link in a network is defined in the specification. (See, Specification, paragraphs 004, 0029, and 0032). Thus, the scope of the claim remains unchanged after the present amendment.

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As discussed above with reference to claim 9, Diffie does not teach or suggest hashing any portion of a network address, much less hashing the route prefix of the network address, and much less hashing the route portion of the network prefix with a public key. Moreover, Diffie does not teach setting a network address to anything, much less setting the node-selectable portion of a network address, and much less setting the node-selectable portion of the network address to a portion of a hashed value. Diffie does not teach or suggest anything about network addresses, much less checking to see if there is an already existing network address. Moreover, as discussed above with reference to claim 9, Diffie does not teach or suggest selecting a modifier, appending the modifier to the public key, and hashing the combined public key and modifier.

Accordingly, claim 10 distinguishes over Diffie such that the rejection under § 102 should be withdrawn .

Independent Claim 11

Claim 11, as amended, recites, *inter alia*, caching the public key in association with the first network address if the derived portion of the second network address matches a corresponding portion of the first network address, the first network address being usable to route a message to the first computing device. The amended portion, the first network address being usable to route a message to the first computing device, does not limit the scope of the claim as previously amended, since the meaning of a network address as usable to route a message is defined in the specification. (See, Specification, paragraphs 004 and 0032). Moreover, the Microsoft Computer Dictionary, 5th ed., Microsoft Press, 2002, defines a network address as a “name or token specifying a particular computer or site on the Internet or other network” or as “a code used to

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specify an email destination.” Thus, the scope of the claim remains unchanged after the present amendment.

Diffie does not teach or suggest these features of claim 11. Rather, Diffie does not compare anything to a network address of a sending device, and as such cannot do anything (much less cache the public key) in response to a match between the derived portion of the second network address and a corresponding portion of the first network address.

Accordingly, claim 11 distinguishes over Diffie such that the rejection under § 102 should be withdrawn. Claims 12–16 depend from claim 11, and are patentable for at least the foregoing reasons.

Independent Claim 17

Claim 17, as amended, recites, *inter alia*, a computer readable medium containing instructions for performing a method which is identical to that claimed in claim 11. The amended portion, the first network address being usable to route a message to the first computing device, does not limit the scope of the claim as previously amended, since the meaning of a network address as usable to route a message is defined in the specification. (See, Specification, paragraphs 004 and 0032). Moreover, the Microsoft Computer Dictionary, 5th ed., Microsoft Press, 2002, defines a network address as a “name or token specifying a particular computer or site on the Internet or other network” or as “a code used to specify an email destination.” Thus, the scope of the claim remains unchanged after the present amendment.

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As a result, claim 17 distinguishes over Diffie for at least the foregoing reasons discussed above with reference to claim 11. Accordingly, Applicant respectfully requests withdrawal of the rejection under § 102.

Independent Claim 21

Claim 21 recites, *inter alia*, the network address derived, at least in part, from a hash of the public key and usable to route a message to the computing device. The amended portion, the network address being usable to route a message to the computing device, does not limit the scope of the claim as previously amended, since the meaning of a network address as usable to route a message is defined in the specification. (See, Specification, paragraphs 004 and 0032). Moreover, the Microsoft Computer Dictionary, 5th ed., Microsoft Press, 2002, defines a network address as a “name or token specifying a particular computer or site on the Internet or other network” or as “a code used to specify an email destination.” Thus, the scope of the claim remains unchanged after the present amendment.

As discussed above with reference to claim 1, Diffie does not teach or suggest a network address, much less deriving at least a part of the network address from the public key, and even much less deriving at least a part of the network address from a hash of the public key. Moreover, even were an encryption of a random number a network address, such encryption of a random number *by* a public key of the mobile device is not derived *from* the public key, and is not derived from a *hash* of the public key.

Accordingly, claim 21 distinguishes over Diffie such that the rejection under § 102 should be withdrawn. Claim 22 depends from claim 21, and is patentable for at least the foregoing reasons.

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CONCLUSION

Accordingly, in view of the above amendment and remarks it is submitted that the claims are patentably distinct over the prior art and that all the rejections to the claims have been overcome. Reconsideration and reexamination of the above Application is requested. Based on the foregoing, Applicants respectfully requests that the pending claims be allowed, and that a timely Notice of Allowance be issued in this case. If the Examiner believes, after this amendment, that the application is not in condition for allowance, the Examiner is requested to call the Applicant's attorney at the telephone number listed below.

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If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicants hereby request any necessary extension of time. If there is a fee occasioned by this response, including an extension fee that is not covered by an enclosed check please charge any deficiency to Deposit Account No. 50-0463.

Respectfully submitted,

Microsoft Corporation

Date:

7/6/05

By:

Carole A. Boelitz

Carole A. Boelitz, Reg. No.: 48,958

Attorney for Applicants

Direct telephone (425) 722-6035

Microsoft Corporation

One Microsoft Way

Redmond WA 98052-6399

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Carole A. Boelitz

Carole A. Boelitz

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